California Solar Initiative

California Public Utilities Commission

Invites Input to

Affordable Housing Component

June 13, 2006

CPUC's Current Solar Program

Self-Generation Incentive Program (SGIP)

- Non-residential systems only, 30 kW and above
- ~$50 million per year since 2001
- 50 MW solar capacity installed; 62 MW in progress
- Administered by utilities +1 NGO

Moscone Center, San Francisco

New California Solar Initiative – CPUC's Program

- CPUC Decision January 2006
- CPUC portion to be $2.5 billion over 2007-2016
- Goal of 2600 MW (equiv. to 4-5% of California's electricity supply). (+ 400 MW CEC NSHP)
- Supports consumer adoption of solar and helps solar industry become self-sustaining
- 10% affordable housing & low income set-aside (approx. $25 million per year)

New California Solar Initiative

- **CPUC Program**
  - Existing residential buildings
    - Single-family homes
    - Low-income / affordable housing
    - Multi-family apartments
  - All commercial buildings
    - Schools
    - Government buildings
  - All industrial facilities
    - Warehouses
    - Manufacturing
  - All agricultural facilities

Panels on an existing home

University of California, Hayward

Phase 1 “Mainstream” Program Issues & Milestones – January 2007 Implementation

- Performance-based incentive levels & structure
- Metering of performance
- Energy efficiency requirements
- Program administration – utility and non-profit administrator for small systems
- Eligible technologies
  - Staff Proposal released — April 25
  - Public Workshop — May 4
  - Party Comments — May 16 & 26
  - Proposed Decision — July 25 target
  - Commission Decision — August 24 target

Phase 2 Issues and Milestones for Mid-2007 Implementation

- Affordable Housing – June-September?
  - Discussion and proposals from stakeholders of low-income communities, affordable housing managers, and housing finance entities.
  - CPUC Staff proposed approach – Q4 2006
- Other Phase 2 Issues – Summer-Fall:
  - Marketing & outreach
  - RD&D to lower costs, boost performance
  - Program evaluation and cost-benefit analysis
  - DG output treatment under RPS and RECs
- Staff Proposal Q4 2006
- Proposed Decision Q1 or Q2 2007

Phase 1CPUC Staff Proposal Principles

- Goal: eliminate ratepayer subsidy over 10-years
- Achieving 2600 solar MW with fixed incentive budget requires lowering cost per solar kWh or BTU via:
  - Improved or new technologies
  - Enhanced solar system efficiency or performance
  - Lower sales & installation costs
- Pay for expected solar system performance, not size of installed capacity, not % of installed cost
- Incentive design principles: Make net solar cost
  - cost-competitive with retail energy purchases, and/or
  - yielding a ten year simple payback for a system with a 25-30 year life.

CPUC Phase 1 "Mainstream" Program Incentives Proposed

Staff Proposal:

- Two incentive levels for 2007:
  - $2.25 per watt for residential and non-taxable entities
  - $1.50 per watt for taxable commercial entities.
- Expected Performance Based Buydown (EPBB) for systems < 100kW (or a smaller threshold size)
  - One-time up-front payment based on EXPECTED system performance
  - Incentive = Incentive Base Rate x System Rating x Design Factor
  - Design factor accounts for panel orientation and shading, maybe geographic location in California
- Performance Based Incentive (PBI) Incentive for Larger Systems
  - Equivalent to EPBB, but paid based on metered kWh output over 5 years, e.g. 17 cents and 26 cents/kWh X 5 years
  - No up-front incentive; owner pays cash or finances 100% cost.

Issues for CPUC's Affordable Housing & Low Income Program

- Initial thinking -- pay up to 25% more in incentives than "mainstream" program.
- What we want to hear today:
  - Solar interests and goals of low income and affordable housing stakeholders.
  - Will "Phase 1" approach work?
  - What approach would be better, what else is needed?
    - Technical assistance?
    - Different administrator?
    - Financing or loans, not incentive payments?
    - Ways to integrate closely with energy efficiency?
    - Other...?

Next Steps

- Identify stakeholders to participate in CPUC program development
- Clarify types of buildings in CPUC vs. CEC programs
- Shall we set broad or specific targets?
- Flesh out details of promising programmatic approaches
- Convene workshop(s) or other means to review promising approaches, identify costs & expected solar production for each
- Identify effective program administration structures